

Work Order ID 155306

Thursday, January 12, 2017 10:53:41 AM

646.3912

B155306

155306

Page 1

Item ID: 646.3912

Revision ID:

Item Name: Shim

Start Date: 1/16/2017

Required Date: 1/20/2017

Reference:

Start Qty: 10.00

Req'd Qty: 10.00

REV. N/C Accept

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Approvals:

Process Plan:

DAS
21
9-89

Date: JAN 13 2017

Tooling:

Date:

Run Start

NR1

Stop

NR2

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

646.3900

N/C

110

0.01

110

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

Dwg Rev: N/CProg Rev: N/C

2-Deburr if necessary

0.03

⑩

01/17/02/03

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.02

⑩

01/17/02/03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 155306***155306***

Page 2

Thursday, January 12, 2017 10:53:41 AM

Item ID: 646.3912

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Shim

Start Date: 1/16/2017

Start Qty: 10.00

10

Cust Item ID:

Required Date: 1/20/2017

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.03

Quality Control

10DAS
38
9-89
FEB 03 2017

140

Outsource process-Cadplate per QSI017 4.1.9.1

0.00

140

Outsource3

Memo

399.98

Outsource process - Cad plate

Issue P/O: 35313
Cat Plating10

FEB 15 2017

DAS
13
9-89

150

Receive & Inspect for Damage & Mat'l Certs

0.00

150

Packaging

Memo

0.03

Packaging

12x
10x SP17-02-24.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 155306***155306***

Page 3

Thursday, January 12, 2017 10:53:41 AM

Item ID: 646.3912 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Shim
Start Date: 1/16/2017 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 1/20/2017 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.03				12			DAS 38 FEB 27 2017
170 *170* Packaging Packaging	Identify as per dwg & Stock Location <u>CCH03</u> Memo ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***	0.00 0.02				12			DAS 6 9-89 FEB 28 2017
180 *180* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.17							17/2/28 JG DAS 21 9-89 FEB 28 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Description Work Order Deviation				Disposition				Completed By	
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Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

Thursday, January 12, 2017 10:53:41 AM

Page 1
T

Work Order ID: 155306

155306

Parent Item: 646.3912

646.3912

Parent Item Name: Shim

Start Date: 1/16/2017

Required Date: 1/20/2017

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 12.10.23 NEW ISSUE DD VERF:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MC1095S.020		Purchased	No			110	sf	10.6000	0.02	0.210526			

MC1095S 020

C1095 Blue Tempered Spring Steel Sheet .020 mcmaster p/n: 9036K499

01/17/02/03

Location

Loc Qty

Loc Code

MAT019

10.6

M130477

0.1

M135525

10.5

3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05243

SHEET 1 OF 1

DWG NO. 646.3900

REV: N/C

PREPARED BY J. BECKER

DATE: 11/13/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: SHIM

APPROVED BY:

ENGR. *[Signature]*

MFG

[Signature]

QC

[Signature]

EFF.

CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED VIEWS. UPDATED TEMPLATE AND TITLE BLOCK.

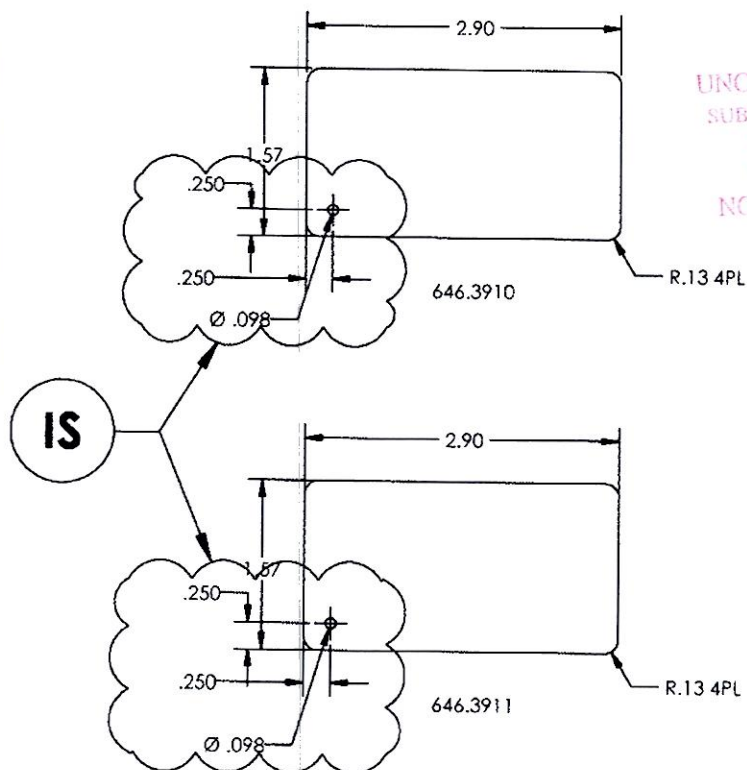
ECR:

15-275

ACTION ITEM:

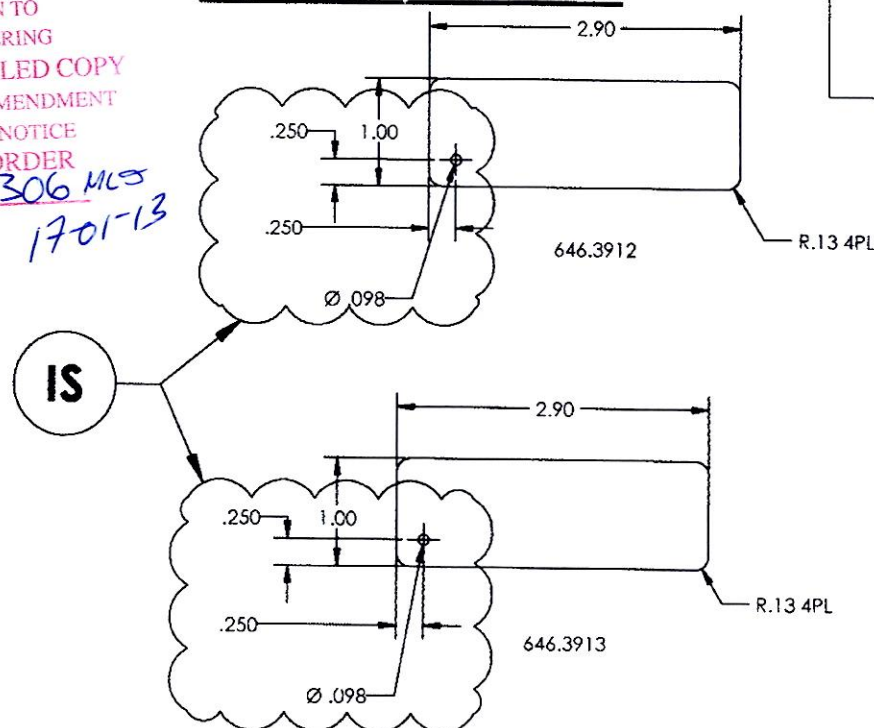
1. N/A.

SHEET 1, ZONE B2 IS:



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 155306 MLC
1701-13

SHEET 1, ZONE B5 IS:



SHEET 1, ZONE C2 IS:

SHEET 1, ZONE C5 IS:

DOCUMENTS EFFECTED:

☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

[illegible]



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35313

Purchase Order Date 2/15/2017

PO Print Date 2/15/2017

Page Number 2 of 3

Order From :

VC-ALT01

Ship To : DART AEROSPACE LTD

GROUP ALTECH
2455 HALPERN

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

ST LAURENT, MONTREAL H4S 1N9

Contact Name

Vendor Phone

514-335-3666

Ship To Contact

Ship To Phone

Ship Via:

FedEx Economy collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FOB Origin

Line Total: \$48.49

155306

DAS
38
9-89

646.3912 SHIM

3/6/2017

Yes

3/6/2017

CAD PLATE PER QQ-P-416, TYPE II, CL2

10.00

\$4.04

\$40.41

Line Total: \$40.41

5 155639

646.3912 SHIM

3/6/2017

Yes

3/6/2017

CAD PLATE PER QQ-P-416, TYPE II, CL2

12.00

\$4.04

\$48.49

Line Total: \$48.49

6 156874

646.3912 SHIM

3/6/2017

Yes

3/6/2017

CAD PLATE PER QQ-P-416, TYPE II, CL2

15.00

\$4.04

\$60.62

Line Total: \$60.62

Note:

2/15/2017



2455, Halpern, Saint-Laurent, QUÉBEC, H4S 1N9
Tel.: (514) 335-3666 Fax.: (514) 335-3868
Internet : www.groupaltech.com

**Bon de livraison / Packing Slip
et / and
Certificat de conformité / Certificate of Compliance**

Bon-Livraison / Pk.Slip # : 125173-1 22/02/2017
Bon-Commande. / W.Order # : 125173
Client P.O. # : PO35313
Transport :

Envoyé à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

Commandé par / Order by

DART AEROSPACE LTD (1427)
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

#	No. Job No. Réf	NoSerie / Part Number Nom Produit / Product	Traitement Process	Poids Weight	Qté Qty	Envoyé Sent	A venir BO
1	UNIT	646.3910 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO ENBRITAL RELIEF	0.00	12	12	0
2	UNIT	646.3910 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO ENBRITAL RELIEF	0.00	12	12	0
3	UNIT	646.3910 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO ENBRITAL RELIEF	0.00	12	12	0
4	UNIT DAS 38 9-89	646.3912 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO ENBRITAL RELIEF	0.00	10	10	0
5	UNIT	646.3912 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO ENBRITAL RELIEF	0.00	12	12	0
6	UNIT	646.3912 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO ENBRITAL RELIEF	0.00	15	15	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.
We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements
Our financial and legal responsibility will not be higher than the amount of invoice.